



# Theater Asset Collection Handbook



**This handbook was compiled from unclassified sources.**

**For further information refer to the MARPP (Manned Airborne Reconnaissance Program Plan).**

# U-2

## Role & Mission

-continuous day or night, high-altitude, all-weather, stand off surveillance of an area in direct support of U.S. and allied ground and air forces



COMMS: see MARPP

Capability  
**multi-sensor photo**  
**electro-optic**  
**infrared and radar imagery**

**Max alt.: above 70,000 ft**  
**Endurance: 9-11hrs**  
**Range: 7,000 nm**  
**Time on Station: 1 hr**  
**Crew: 1**

# RC-135V/W RIVET JOINT

## Role & Mission

- Provide direct, near real-time reconnaissance info and electronic warfare support to theater commanders and combat forces
- SIGINT collection asset



**Comms: secure UHF, VHF, HF and SATCOM  
data: TADIL/A and TIBS**

**Capability: see MARPP**

**Max alt: 35,000 ft  
Endurance: 11 hrs, 20 hrs with  
Range:  
Time on Station:  
Crew: see MARPP**

# C-130 PACER COIN

## Role & Mission

- employed as a day/night, all-weather reconnaissance and surveillance system which provides IMINT
- used to support special operations and U.S. counter-drug operations

## COMMS:

- HF
- VHF
- secure voice

## Capability:

- Infrared (IR)
- TV
- panoramic optical camera
- Infrared Line Scanner (IRLS)
- Forward Looking Infrared Radar (FLIR)



**Max alt: 16,000 ft**  
**Endurance: 11 hrs**  
**Range: 2,049nm to 4,522nm**  
**depending on payload**

**Time on Station:**

**Crew: 4-9**

# C-130 SENIOR SCOUT

## Role & Mission

• A SIGINT collection asset. Consists of a removable monitoring sensor package designed for installation and removal in any C-130E/H aircraft. Provides rapidly deployable worldwide SIGINT support for theater, national, counternarcotics, and special operations requirements.



**Comms:** HF / VHF / secure voice

**Capability:** see MARPP

**Platform:** EC-130E Comfy Levi

**Max alt:** 30,560 ft

**Endurance:** 7-8 hrs, 16 if refuel

**Range:** 2,049nm to 4,522nm depending on payload

**Time on Station:**

**Crew:** 4 - 9

# RC-135U COMBAT SENT

## Role & Mission

- Employed as a Scientific and Technical ELINT Collection System



## Comms:

-TIBS

-secure voice

## Capability:

See MARPP

Max alt: 33,000ft

Endurance: 10 hrs /18 if ref

Range:

Time on Station:

Crew: 5

# RC-135S COBRA BALL

## Role & Mission

- Is used for tracking ballistic-missile test at long range



## Comms:

- HF
- VHF
- UHF
- UHF SATCOM
- TIBS
- JTIDS

## Capability:

- See MARPP

**Max alt: 35,000ft**

**Endurance: 8-10hrs**

**30 if refueled**

**Range: see MARPP**

**Time on Station: see MARPP**

**Crew: see MARPP**

# JOINT STARS

## Role & Mission

JSTARS is a long-range, air-to-ground surveillance system designed to locate, classify and track ground targets in all weather conditions



## Comms :

SATCOM

UHF

HF

VHF

JTIDS datalink

## Capability:

Side Aperture Radar (SAR)

Moving Target Indicator (MTI)

**Platform: E-8C**

**Max Altitude: 42,000 ft**

**Endurance: 11 hrs - 20 hrs with  
Range: 150 mi**

**Time on Station:**

**Crew: 22**

# PIONEER

## Role & Mission

- PIONEER is a short range UAV
- provides capability to provide imagery intelligence (IMINT) for spotters for naval gunfire support



## COMMS:

**Data Link: C-band/UHF**

**Max alt: 15,000ft**  
**Endurance: 3.5 - 4 hrs**  
**Range: 185 km**  
**Time on Station: 3.5 - 4hrs**  
**Crew: 0**

## Capability:

**optical daytime camera**  
**thermal nighttime camera**

# RC-12 K/N GUARDRAIL COMMON SENSOR

## Role & Mission

- provides near real-time SIGINT and targeting information
- collects selected low, mid and high band radar signals, identifies/classifies them, and determines their location



Comms: see MARPP

## Capability:

- ELINT collection and DF
- COMINT collection and DF

Max alt: 30,000ft

Endurance: 5.5 hrs

Range: up to 1,666nm

Time on Station:

Crew: 1-2

# EH-60L QUICKFIX

## Role & Mission

**-provides the capability to listen to, locate for hard-kill targeting or order-of-battle resolution or render ineffective through jamming opposition command and control and fire control nets and identify and locate counter/mortar, counter/battery, ground surveillance and other radar emissions**



## Comms:

**UHF**

**VHF**

**secure voice**

## Capability:

**See MARPP**

**Platform: EH-60L Blackhawk**

**Max Alt: 5,835nm**

**Endurance: 2 hrs**

**Range: 315nm**

**Time on Station:**

**Crew: 3**

# DHC-7 ARL

## Airborne Reconnaissance - Low

### Role & Mission

**-multifunction, day/night, all-weather reconnaissance intel asset developed to support the requirement for a low profile intelligence aircraft**



### Comms/Capability:

**SIGINT = HF/VHF/UHF**

**IMINT = Infrared Line Scanner (IRLS)**

**Forward Looking Infrared Radar (FLIR)**

**Daylight Camera**

**COMMON = Side Aperture Radar (SAR)**

**Moving Target Indicator (MTI)**

**Low Level TV (LLTV)**

**satellite datalink**

**Platform: modified DHC**

**Max alt: 25,000 ft**

**Endurance: 8 hrs**

**Range: 1500 nm**

**Time on Station:**

**Crew: 7**

# Predator

## Role & Mission

- medium altitude, long-endurance unmanned aerial vehicle system
- used for reconnaissance, surveillance and target acquisition



**Comms:**

**Capability:**

**Electro-Optical (EO)**

**Forward Looking Infrared Radar (FLIR)**

**Side Aperture Radar (SAR)**

**Max altitude: 26,000 ft**

**Endurance: >40 hrs**

**Range: 400 nm**

**Time on Station: 24 hrs at**

**Crew: 0**

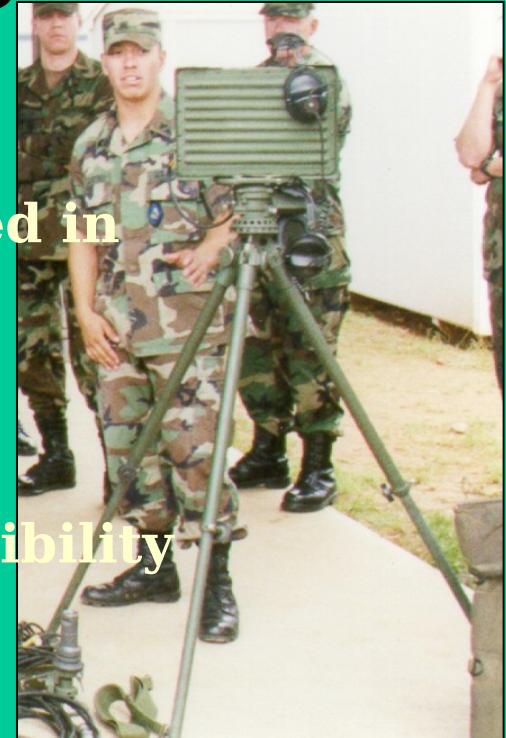
# LRSU

## (Long-Range Surveillance Unit)

### Role & Mission

- LRS soldiers provide the commanders with a HUMINT collection capability that is near real-time, all weather and all-terrain
- LRSU mission last between 24 hrs to 7+ days
- capable of HF or tactical satellite communications
- typically use 6 man teams

# **AN/PPS-15**



## **Role & Mission**

**-a Ground Surveillance Radar, employed in light units**

**-it is man-transportable**

**-is best used in scenarios of limited visibility**

## **Range:**

**1.5 km vs personnel**

**3 km vs vehicles**

**-can only detect moving targets**

# **AN/PPS-5B**

## **Role & Mission**

**-a Ground Surveillance Radar, employed in light and heavy units**

**-technically man portable, but is normally transported in a HMMWV or M113**

## **Range:**

**6 km vs personnel**

**10 km vs vehicles**

**-can only detect moving targets**



# AN/GSQ-187 REMBASS

## Remotely Monitored Battlefield Sensor System

### Role & Mission

- Detects, classifies and determines the direction of movement of intruding personnel and vehicles

### Sensors:

#### DT-561 Magnetic

range: 3m - personnel  
15m - wheeled  
25m - tracked

#### DT-562 Seismic/Acoustic

range: 50m - personnel  
250m - wheeled  
350m - tracked



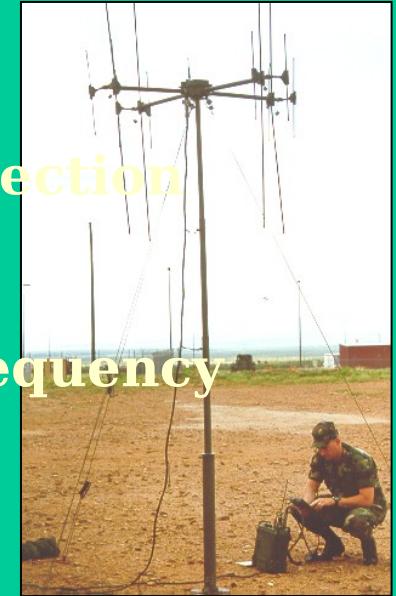
#### DT-565 Infrared

range: 20m - personnel  
50m - vehicle

# AN/PRD-12 (LMRDFS)

## Role & Mission

- a lightweight man-transportable Radio Direction Finding System
- capable of intercept in the HF/VHF/UHF frequency system
- Electronic Support / COMINT asset
- found in 2 varieties
  - Low Level Voice Intercept (LLVI), found in light units
  - AN/TRQ-32 found in light and heavy units



# AN/PRD-13

## Role & Mission

- man portable communications band
- DF intercept system
- replacing the AN/PRD-12 in light units
- COMINT asset



# SSMS SOF SIGINT Manpack System

## Role & Mission

- COMINT
- DF intercept

**-jumpable, manpackable, lightweight intercept and direction finding system**

**-provides unconventional collection and force protection for Special Forces units**

**-used by Special Forces Group MI Detachment SOF-A Teams**



# AN/PSQ-9

## Team Portable COMINT System

### Role & Mission

-COMINT

-Electronic Support

Intercept: 0.5 -1000 Mhz

DF: 0.5 - 500 Mhz

-Man-portable communications band DF/intercept system

-Used by USMC Standard Collection Teams

-WAN capable



# AN/TRQ-32 TEAMMATE

## Role & Mission

-COMINT

-Electronic Support

Intercept: .5 - 500 Mhz

DF: 20 - 150 Mhz\*

-Prime Mover: M1097

-Interoperable with AN/PRD-12, AN/TSQ-138, Quickfix

-Includes AN/PRD-12 and AN/TSQ-175 TIGER

-capable of intercept in the HF/VHF/UHF bands, but can only  
find in the VHF band

-crew: 4



# AN/TSQ-138 TRAILBLAZER

## Role & Mission

-provides COMINT intercept in the HF/VHF/UHF ranges

-Electronic Support

Intercept: .5 - 500 Mhz

DF: 20-80 Mhz

-Prime Mover: 5 ton

-Requires Trailer Support Unit (TSU) with 30 kW Generator

-Interoperable with AN/TRQ-32 and Quickfix

-Found only in heavy GS companies



# AN/TLQ-17 TRAFFICJAM

## Role & Mission

-COMINT

-Electronic Support/ Electronic Attack

Intercept: 20 - 80 Mhz

Output: 550+ watts

-Prime Mover: M1037

-Cannot Direction-Find

-Found in GS companies

-Primary use as a jammer, can be used for deception operations



# AN/MLQ-36 MEWSS

## Role & Mission

-COMINT

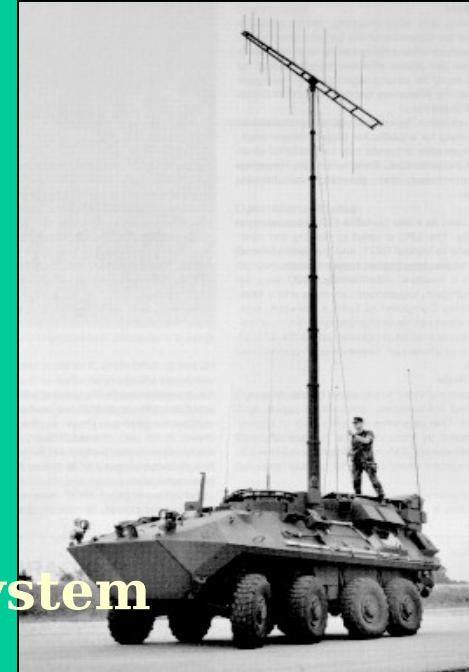
-Electronic Support/ Electronic Attack  
Intercept

DF

-Mobile Electronic Warfare Support System

-Prime Mover: LAV-25

-Found in USMC Radio Battalions



# GBCS

## Role & Mission

- The Ground-Based Common Sensor is the Army's only on-the-ground, all-weather, all-terrain, self-contained, fully integrated, 24-hour signal intelligence and electronic warfare asset
- COMINT and ELINT asset
- provides a “smart jamming” capability against communications emitters



**Comms:**

**Capability:** COMINT  
ELINT

# Fire Finders AN/TPQ-36 AN/TPQ-37

## AN/TPQ-36

### Role & Mission

-used by artillery battalions to locate hostile weapons, both mortar and short-to-medium range

crew: 9



## AN/TPQ-37

### Role & Mission

-is a mobile Phased Array Artillery Locating Radar System

-used to detect and accurately locate enemy artillery and rocket weapons to permit rapid engagement with counterfire



# EP-3E ARIES II

## Role & Mission

- electronic warfare and reconnaissance
- missions include anti-surface warfare, anti-submarine warfare, mining, reconnaissance and surveillance



**Comms:** HF / VHF / UHF  
**UHF SATCOM**

**Capability:** COMINT  
-Electronic Support  
ELINT

**Max alt:** 29,000ft  
**Endurance:** 12+ hrs  
**Range:** 3000 nm  
**Time on Station:** 3 hrs  
**Crew:** 24

# REEF POINT

## Role & Mission

- a COMINT and ELINT collection as



## Comms:

**UHF**

**VHF**

**HF**

**SATCOM**

## Capability:

**COMINT/ELINT**

**Inverse Synthetic Array Radar (ISAR)**

**Platform: P-3B/C**

**Max alt: 8,625m**

**Endurance: 10 hrs**

**Range: 7,408 km**

**Time on Station:**

**Crew:**

# F-14 TARPS

## Tactical Airborne Reconnaissance Pod System

### Role & Mission

- IMINT collection asset



**Comms:** UHF

**Capability:** KS-87 frame camera  
KA-99 low-alt. Panoramic camera  
AAD-5 imaging infrared sensor

**Platform:** F-14 Tomcat

**Max alt:** 50,000ft

**Endurance:** 3 hrs

**Range:** 1,740 nm

**Mission Radius:** 380 to 500nm

**Time on Station:**

**Crew:** 2

# Outboard AN/SSQ-108(V)

## Role & Mission

- Provides electronic warfare signals acquisition and direction finding with the capability to detect, locate and identify hostile targets and input this information into a tactical data system

**Capability:** SSQ-108 Outboard VHF Adcock direction finding  
24 small deck edge antennas for LM / MF-HF band direction finding

# AN/SSQ-80A

## Role & Mission

-signal acquisition system intended to augment suites or to be installed as a carry-on system in non-SSES ships

# SSES

# Ships Signal Exploitation Space

## **Role & Mission**

**-provides SIGINT based I&W information**

# Combat DF

## Role & Mission

- automated long range hostile target acquisition and direction finding system can detect, locate, categorize and arc



**Comms:** HF DF  
VHF-UHF  
LAN  
Skywave

**Capability:**

**Crew:**